Julius Lee Engineering

RE: 319200 - CHAMBERS CONT. - HOUSE A

1109 Coastal Bay Blvd.
Boynton Beach, FL 33435

Site Information:
Project Customer: SCOTT ESPENSHIP - O/B Project Name: 319200 Model: HOUSE A
Lot/Block: TBD Subdivision: RESERVE AT JEWEL LAKE
Address:
City: COLUMBIA CTY State: FL

Name Address and License # of Structural Engineer of Record, If there is one, for the building.
Name: License #:
Address:
City: State:

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):
Design Code: FBC2007/TPI2002 Design Program: MiTek 20/20 7.1
Wind Code: ASCE 7-05 Wind Speed: 110 mph Floor Load: N/A psf
Roof Load: 32.0 psf

This package includes 5 individual, dated Truss Design Drawings and 0 Additional Drawings.
With my seal affixed to this sheet, I hereby certify that I am the Truss Design Engineer and this index sheet conforms to 61G15-31.003, section 5 of the Florida Board of Professional Engineers Rules.
This document processed per section 16G15-23.003 of the Florida Board of Professionals Rules

In the event of changes from Builder or E.O.R. additional coversheets and drawings may accompany this coversheet. The latest approval dates supersede and replace the previous drawings.

No.	Seal#	Truss Name	Date
1	I4156857	T01	11/18/09
2	I4156858	T01A	11/18/09
3	I4156859	T01G	11/18/09
4	I4156860	T02	11/18/09
5	I4156861	T02G	11/18/09

COLUMBIA COUNTY BUILDING DEPARTMENT
Received for FILE COPY
Code Compliance
PLANS EXAMINER

The truss drawing(s) referenced above have been prepared by MiTek Industries, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Lake City).

Truss Design Engineer's Name: Julius Lee

My license renewal date for the state of Florida is February 28, 2011.

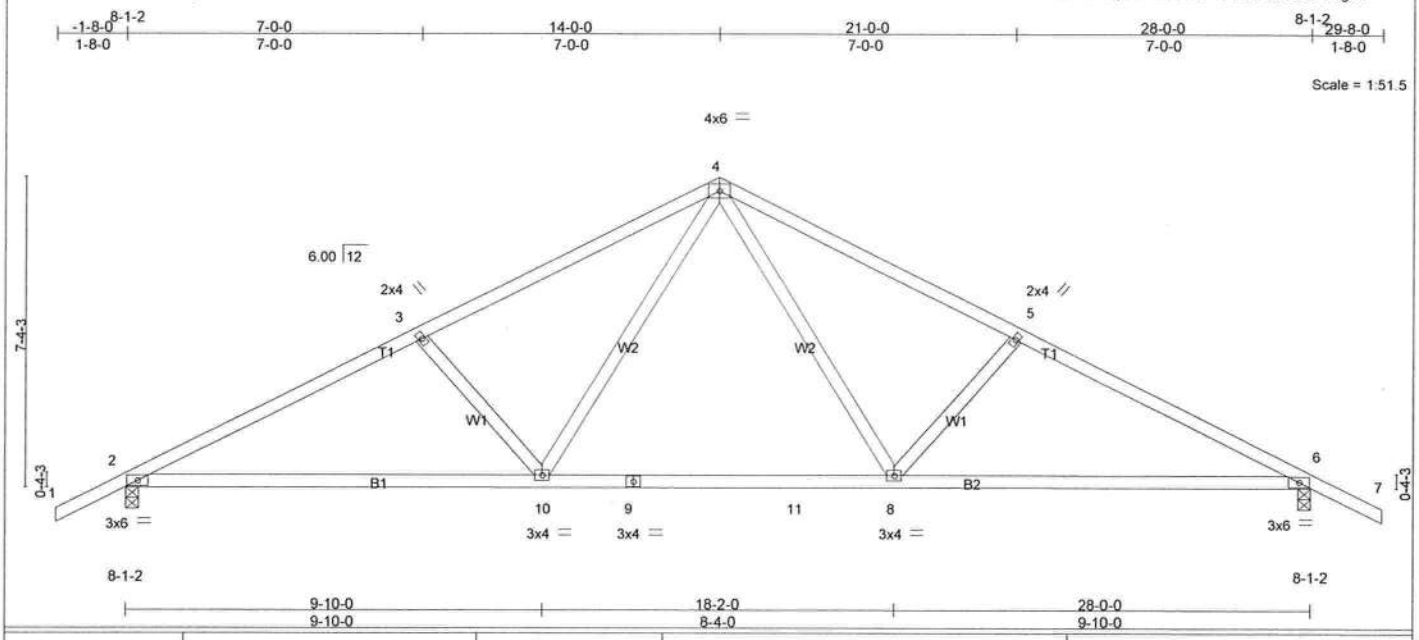
NOTE: The seal on these drawings indicate acceptance of professional engineering responsibility solely for the truss components shown. The suitability and use of this component for any particular building is the responsibility of the building designer, per ANSI/TPI-1 Chapter 2.

JULIUS S.K. LEE
LICENSE
No 34869
STATE OF FLORIDA
PROFESSIONAL ENGINEER

November 18,2009
Julius Lee

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156857
319200	T01	COMMON	6	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055 — 7.140 s Oct 1 2009 MiTek Industries, Inc. Wed Nov 18 09:26:22 2009 Page 1



LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.50	Vert(LL)	-0.24	8-10	>999	360	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.29	Vert(TL)	-0.37	2-10	>893	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.45	Horz(TL)	0.05	6	n/a	n/a		
BCDL	5.0	Code FBC2007/TPI2002		(Matrix)		Wind(LL)	0.11	6-8	>999	240	Weight: 131 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP M 31
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-5-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 8-0-15 oc bracing.

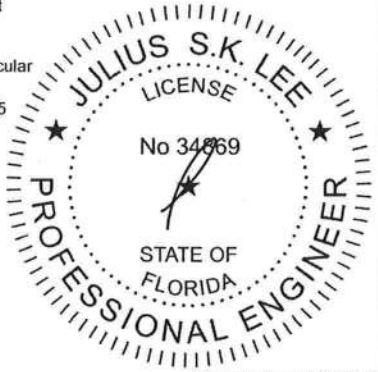
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 2=1062/0-3-8, 6=1061/0-3-8
Max Horz 2=142(LC 7)
Max Uplift 2=-399(LC 7), 6=-399(LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-1759/1212, 3-4=-1510/1127, 4-5=-1507/1127, 5-6=-1756/1211
BOT CHORD 2-10=-902/1497, 9-10=-412/994, 9-11=-412/994, 8-11=-412/994, 6-8=-919/1495
WEBS 4-8=-377/544, 5-8=-372/489, 4-10=-377/548, 3-10=-372/489

NOTES (8-9)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
5) All bearings are assumed to be SYP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 399 lb uplift at joint 2 and 399 lb uplift at joint 6.
7) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
8) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
9) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard



November 18,2009

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	
319200	T01A	COMMON	10	1	Job Reference (optional)	I4156858

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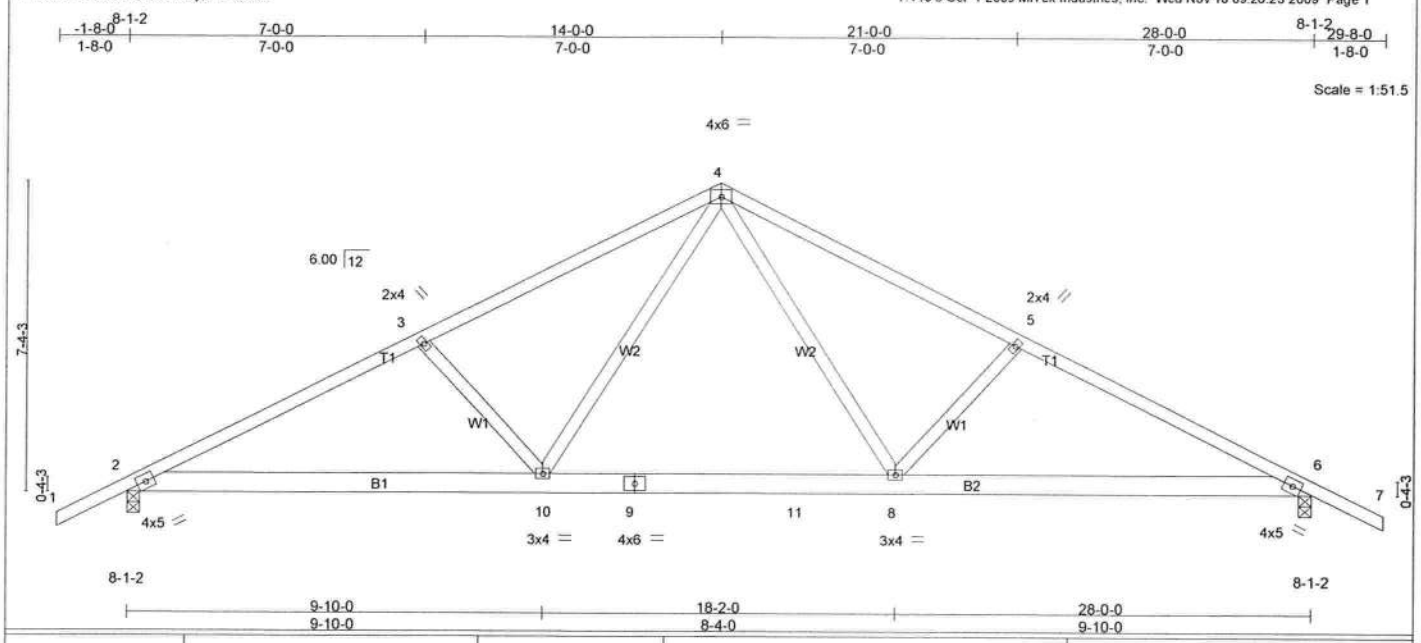


LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.60	Vert(LL)	-0.23	8-10	>999	360	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.45	Vert(TL)	-0.34	8-10	>980	240		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.61	Horz(TL)	0.05	6	n/a	n/a		
BCDL	5.0	Code FBC2007/TPI2002		(Matrix)		Wind(LL)	0.20	8-10	>999	240	Weight: 154 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 6 SYP No.1D
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-10-7 oc purlins.
BOT CHORD Rigid ceiling directly applied or 7-7-12 oc bracing.

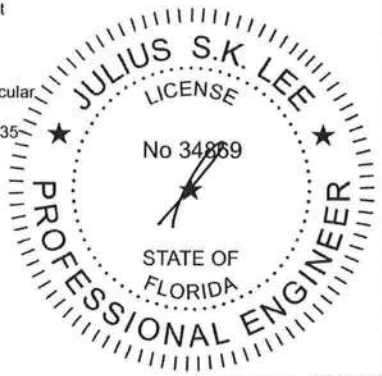
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 2=1311/0-3-8, 6=1309/0-3-8
Max Horz 2=-144(LC 8)
Max Uplift 2=-462(LC 7), 6=-462(LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2375/1512, 3-4=-2123/1419, 4-5=-2120/1419, 5-6=-2372/1512
BOT CHORD 2-10=-1172/2051, 9-10=-596/1377, 9-11=-596/1377, 8-11=-596/1377, 6-8=-1187/2049
WEBS 4-8=-529/858, 5-8=-371/489, 4-10=-530/864, 3-10=-371/489

NOTES (9-10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members, with BCDL = 5.0psf.
5) All bearings are assumed to be SYP No.2 .
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 462 lb uplift at joint 2 and 462 lb uplift at joint 6.
7) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
8) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
9) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
10) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard
1) Regular: Lumber Increase=1.25, Plate Increase=1.25
Uniform Loads (plf)
Vert: 1-4=-54, 4-7=-54, 2-10=-10, 9-10=-70(F=-60), 9-11=-110(F=-60), 8-11=-70(F=-60), 6-8=-10



November 18,2009

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156859
319200	T01G	GABLE	2	1	Job Reference (optional)	

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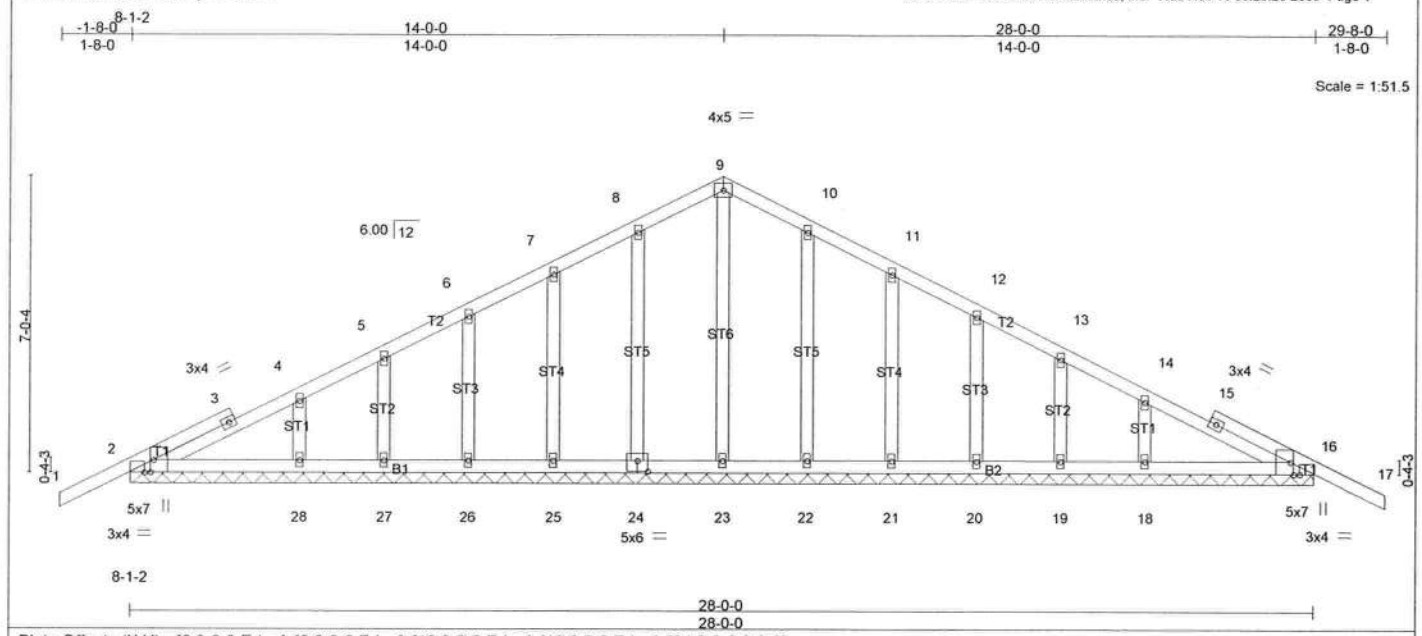


Plate Offsets (X,Y): [2:0-3-8,Edge], [2:0-2-8,Edge], [16:0-3-8,Edge], [16:0-2-8,Edge], [24:0-3-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.31	Vert(LL)	-0.01	17	n/r	120	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.08	Vert(TL)	-0.01	17	n/r	90		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.12	Horz(TL)	0.02	16	n/a	n/a		
BCDL	5.0	Code FBC2007/TPI2002		(Matrix)							Weight: 161 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
OTHERS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS All bearings 28-0-0.
(lb) - Max Horz 2=158(LC 7)
Max Uplift All uplift 100 lb or less at joint(s) except 2=-238(LC 7), 16=-263(LC 8), 24=-153(LC 7), 25=-152(LC 7), 26=-153(LC 7), 27=-139(LC 7), 28=-193(LC 7), 22=-150(LC 8), 21=-153(LC 8), 20=-153(LC 8), 19=-137(LC 8), 18=-200(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 23, 24, 25, 26, 27, 22, 21, 20, 19 except 2=316(LC 11), 16=316(LC 12), 28=288(LC 11), 18=288(LC 12)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 8-9=-36/311, 9-10=-36/311
WEBS 4-28=-247/272, 14-18=-247/271

NOTES (13-14)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Gable studs spaced at 2-0-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) All bearings are assumed to be SYP No.2 .
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 238 lb uplift at joint 2, 263 lb uplift at joint 16, 153 lb uplift at joint 24, 152 lb uplift at joint 25, 153 lb uplift at joint 26, 139 lb uplift at joint 27, 193 lb uplift at joint 28, 150 lb uplift at joint 22, 153 lb uplift at joint 21, 153 lb uplift at joint 20, 137 lb uplift at joint 19 and 200 lb uplift at joint 18.
11) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
13) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
14) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

JULIUS S.K. LEE LICENSE No 34869 STATE OF FLORIDA PROFESSIONAL ENGINEER

November 18,2009

LOAD CASE(S) Standard

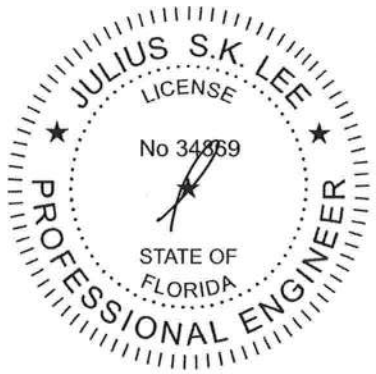
Continued on page 2

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156859
319200	T01G	GABLE	2	1	Job Reference (optional)	

LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-9=-79(F=-25), 9-17=-79(F=-25), 2-16=-10



November 18,2009

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156860
319200	T02	SPECIAL	18	1	Job Reference (optional)	

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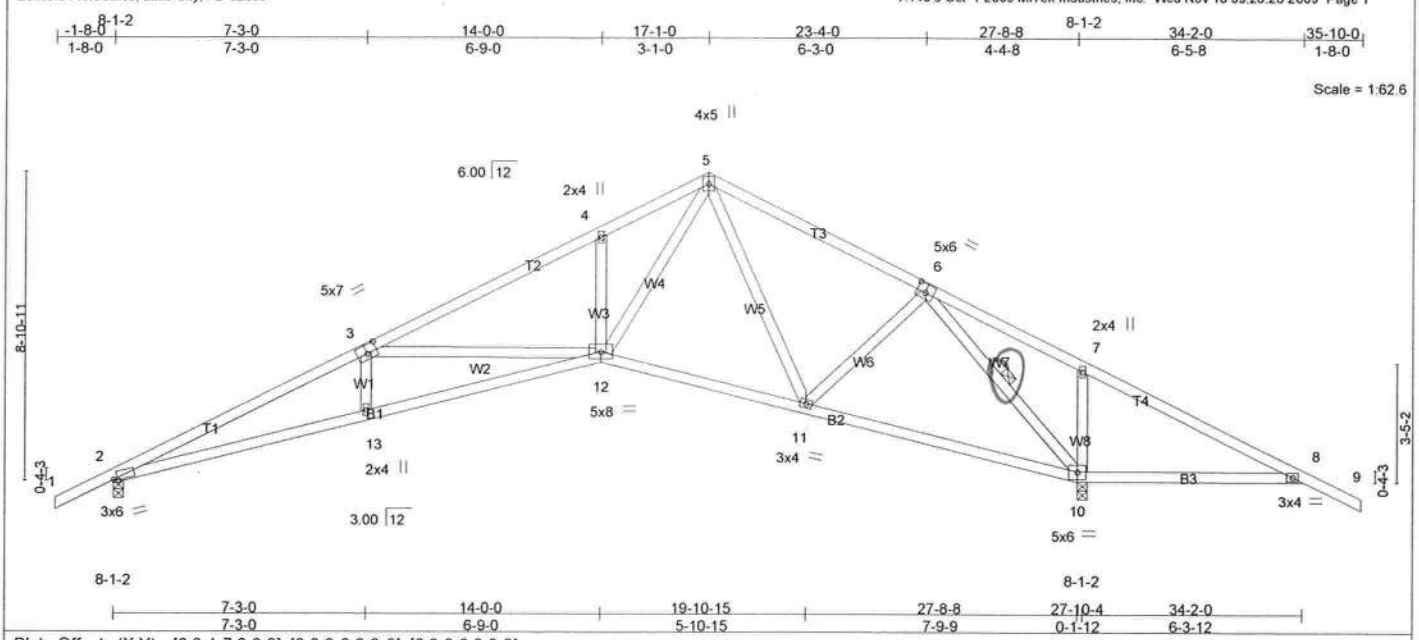


Plate Offsets (X,Y): [2:0-1-7,0-0-9], [3:0-3-8,0-3-0], [6:0-3-0,0-3-0]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase	1.25	TC	0.53	Vert(LL)	-0.19	12-13	>999	360	MT20	244/190
TCDL	7.0	Lumber Increase	1.25	BC	0.53	Vert(TL)	-0.38	12-13	>861	240		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(TL)	0.23	10	n/a	n/a		
BCDL	5.0	Code FBC2007/TPI2002		(Matrix)		Wind(LL)	0.25	12-13	>999	240	Weight: 172 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-6-2 oc purlins.
BOT CHORD Rigid ceiling directly applied or 5-5-13 oc bracing.
WEBS 1 Row at midpt 6-10

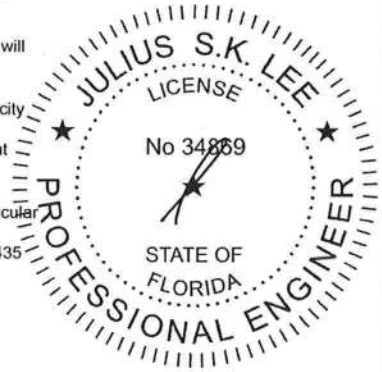
MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 2=911/0-3-8, 10=1454/0-3-8
Max Horz 2=-164(LC 8)
Max Uplift 2=-400(LC 7), 10=-793(LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2614/1615, 3-4=-1692/921, 4-5=-1649/1095, 5-6=-803/478, 6-7=-869/670, 7-8=-1061/685
BOT CHORD 2-13=-1307/2326, 12-13=-1309/2325, 11-12=-138/800, 10-11=-80/405, 8-10=-538/1112
WEBS 3-12=-817/888, 4-12=-293/363, 5-12=-798/1292, 5-11=-317/278, 6-11=-184/376, 6-10=-1493/1268, 7-10=-304/422

NOTES (9-10)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) and C-C Exterior(2) zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
5) All bearings are assumed to be SYP No.2 .
6) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
7) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 400 lb uplift at joint 2 and 793 lb uplift at joint 10.
8) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
9) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
10) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

LOAD CASE(S) Standard



November 18,2009

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156861
319200	T02G	GABLE	2	1	Job Reference (optional)	

Builders FrstSource, Lake City, FL 32055 — 7.140 s Oct 1 2009 MiTek Industries, Inc. Wed Nov 18 09:26:27 2009 Page 1

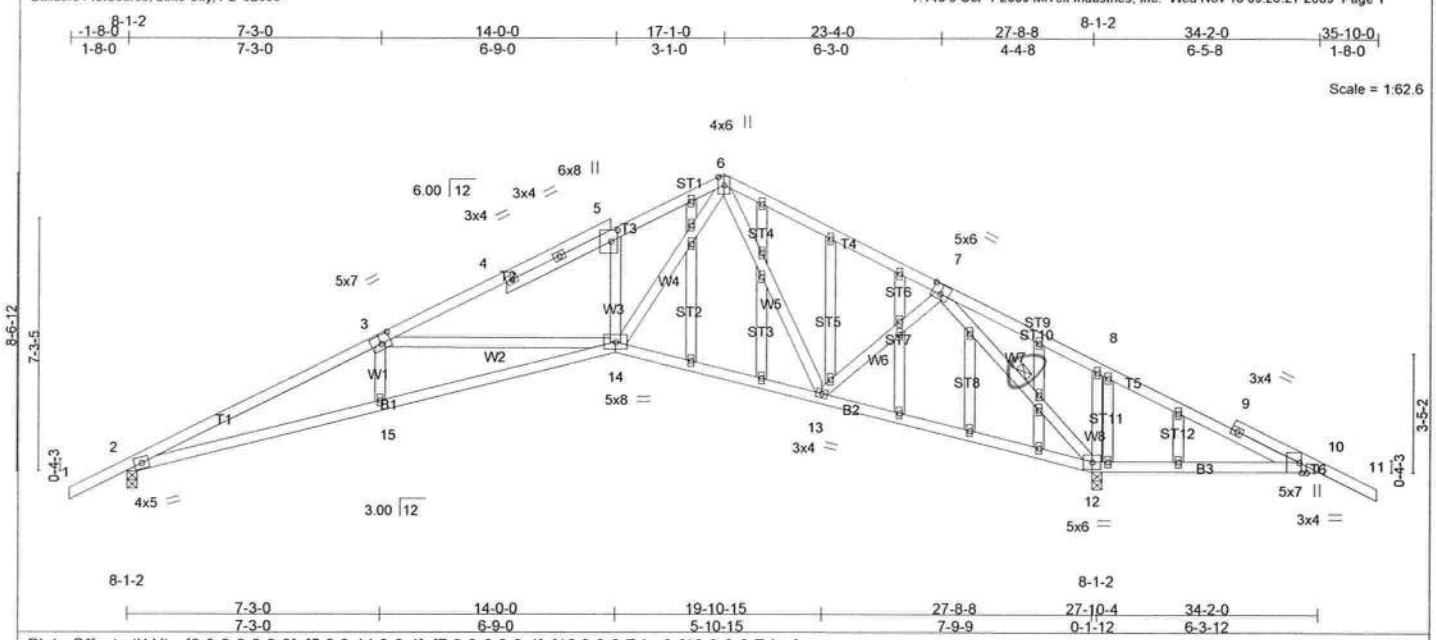


Plate Offsets (X,Y): [3:0-3-8,0-3-0], [5:0-3-14,0-2-4], [7:0-3-0,0-3-4], [10:0-2-8,Edge], [10:0-3-8,Edge]

LOADING (psf)		SPACING 2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	20.0	Plates Increase 1.25	TC	0.67	Vert(LL)	-0.20	14-15	>999	360	MT20	244/190
TCDL	7.0	Lumber Increase 1.25	BC	0.63	Vert(TL)	-0.41	14-15	>812	240		
BCLL	0.0 *	Rep Stress Incr NO	WB	0.60	Horz(TL)	0.25	12	n/a	n/a		
BCDL	5.0	Code FBC2007/TPI2002	(Matrix)		Wind(LL)	0.28	14-15	>999	240	Weight: 219 lb	

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3
OTHERS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-3-11 oc purlins.
BOT CHORD Rigid ceiling directly applied or 4-11-9 oc bracing.
WEBS 1 Row at midpt 7-12

MiTek recommends that Stabilizers and required cross bracing be installed during truss erection, in accordance with Stabilizer Installation guide.

REACTIONS (lb/size) 2=966/0-3-8, 12=1945/0-3-8
Max Horz 2=-185(LC 8)
Max Uplift 2=-688(LC 7), 12=-1518(LC 8)

FORCES (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 2-3=-2821/1775, 3-4=-1972/1155, 4-5=-1865/1167, 5-6=-1901/1283, 6-7=-1024/664, 7-8=-1268/1080, 8-9=-1416/1072, 9-10=-1397/935
BOT CHORD 2-15=-1589/2512, 14-15=-1590/2511, 13-14=-382/1006, 12-13=-196/505, 10-12=-872/1434
WEBS 3-14=-736/838, 5-14=-242/310, 6-14=-894/1354, 6-13=-389/348, 7-13=-252/450, 7-12=-2111/1816, 8-12=-381/450

NOTES (13-14)
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-05; 110mph (3-second gust); TCDL=4.2psf; BCDL=3.0psf; h=18ft; Cat. II; Exp C; enclosed; MWFRS (low-rise) gable end zone and C-C Exterior(2) zone; cantilever right exposed ;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1-2002.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 2-0-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) All bearings are assumed to be SYP No.2 .
9) Bearing at joint(s) 2 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 688 lb uplift at joint 2 and 1518 lb uplift at joint 12.
11) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.
12) In the LOAD CASE(S) section, loads applied to the face of the truss are noted as front (F) or back (B).
13) This manufactured product is designed as an individual building component. The suitability and use of this component for any particular building is the responsibility of the building designer per ANSI TPI 1 as referenced by the building code.
14) Truss Design Engineer: Julius Lee, PE: Florida P.E. License No. 34869: Address: 1109 Coastal Bay Blvd. Boynton Beach, FL 33435

JULIUS S.K. LEE LICENSE No 34869 STATE OF FLORIDA PROFESSIONAL ENGINEER

November 18,2009

Continued on page 2

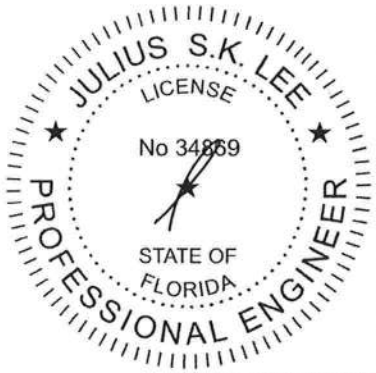
LOAD CASE(S) Standard

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

Job	Truss	Truss Type	Qty	Ply	CHAMBERS CONT. - HOUSE A	I4156861
319200	T02G	GABLE	2	1	Job Reference (optional)	

LOAD CASE(S) Standard

1) Regular: Lumber Increase=1.25, Plate Increase=1.25
   Uniform Loads (plf)
   Vert: 1-5=-54, 5-6=-79(F=-25), 6-11=-79(F=-25), 2-14=-10, 12-14=-10, 10-12=-10



November 18,2009

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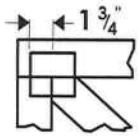
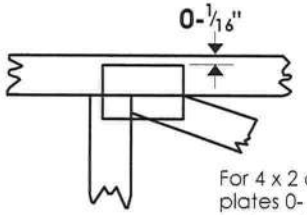
Boynton, FL 33435

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

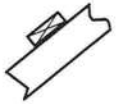
*** Plate location details available in MiTek 20/20 software or upon request.**

PLATE SIZE

4 x 4

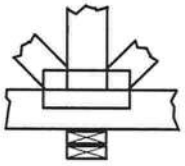
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T, I or Eliminator bracing if indicated.

BEARING

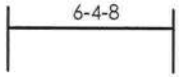


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number where bearings occur.

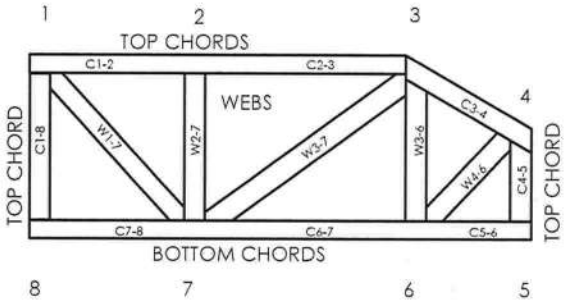
Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-89: Design Standard for Bracing.
BCSI1: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



dimensions shown in ft-in-sixteenths (Drawings not to scale)



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ER-5243, 9604B, 9730, 95-43, 96-31, 9667A
NER-487, NER-561
95110, 84-32, 96-67, ER-3907, 9432A

Julius Lee Engineering
1109 Coastal Bay Blvd.
Boynton, FL 33435

⚠ General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

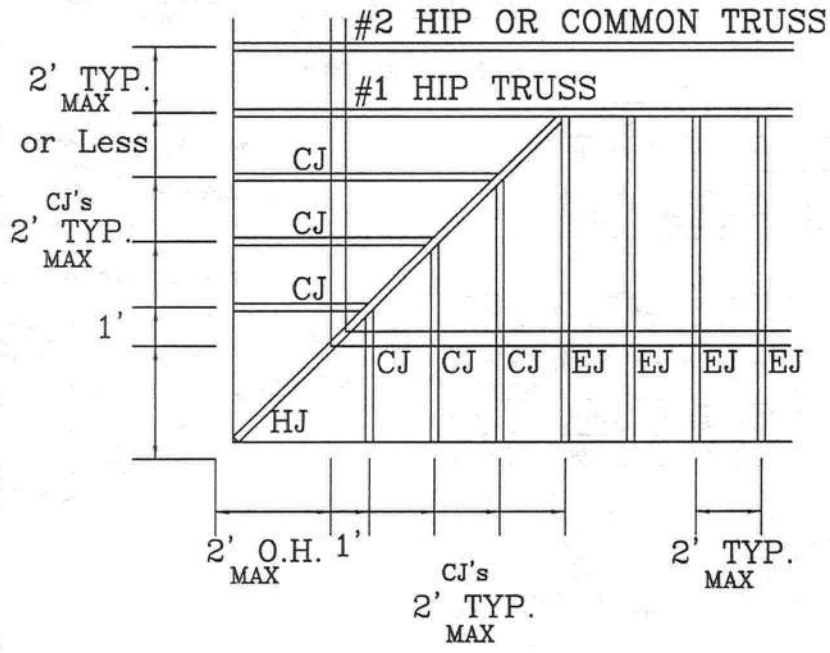
1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI1.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative T, I, or Eliminator bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.

STEPDOWN CORNER SET

TOP CHORD 2X4 SO. PINE #2 or Better
BOT CHORD 2X4 SO. PINE #2 or Better
WEBS 2X4 SO. PINE #3 or Better

120 MPH MAX

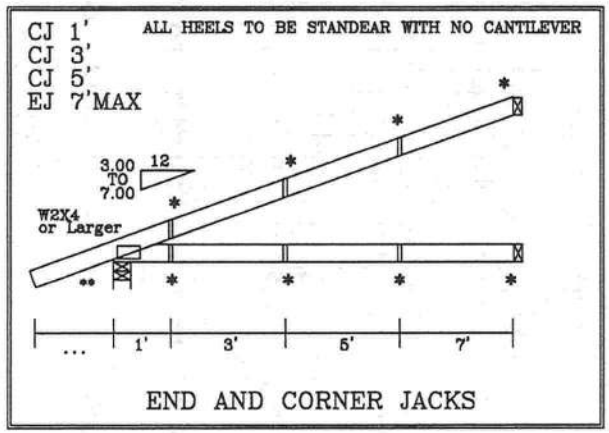
Setback 7' or Less



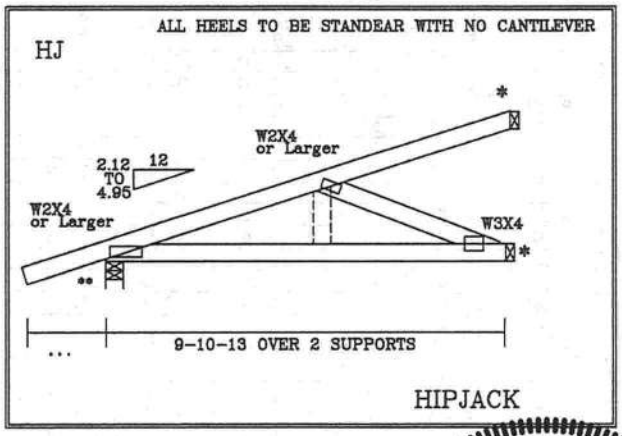
PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.
UPLIFT: 400# or Less
BRG LOC: *
UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND SPEED=120 "C" MPH. MEAN HGT=28 FT. ENCLOSED. (ASCE 7-02)

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED. TILE
UPLIFT: 400# or Less
BRG LOC: *
UPLIFT BASED ON 15.0 PSF TOTAL DEAD LOAD. WIND SPEED=120 "C" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)

PROVIDE UPLIFT CONNECTIONS AT BEARINGS AS INDICATED.
UPLIFT: 400# or Less
BRG LOC: *
UPLIFT BASED ON 7.2 PSF TOTAL DEAD LOAD. WIND SPEED=120 "B" MPH. MEAN HGT (of jacks)=28 FT. ENCLOSED. (ASCE 7-02)



END AND CORNER JACKS



HIPJACK

* (3) 16d TOENAILS

** SEE EOR FOR TIE DOWN

UPLIFT VALUES DO TAKE INTO ACCOUNT PORCHES EXPOSED
BC LIVE LOAD IS NON CONCURRENT 10*

CORNER SET SETBACK
7'0" MAX

JULIUS LEE
CONS. ENGINEERS, P.A.
1455 SW 4th AVENUE
DELRAY BEACH, FL 33444-2161
NO. 54869
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHINGLE		
TC LL	20	MAX PSF
TC DL	7	MAX PSF
BC LL	10*	MAX PSF
BC DL	5	MAX PSF
TILE		
TC LL	20	MAX PSF
TC DL	20	MAX PSF
BC LL	10*	MAX PSF
BC DL	5	MAX PSF
DUR. FAC.	1.25	
SPACING	2'	MAX

REF	7'MAX STBK CS
DATE	Jun./27/2008
DRWG	
-ENG	

REVIEWED
By julius lee at 10:52 am, Jun 27, 2008

ASCE 7-02: 130 MPH WIND SPEED, 30' MEAN HEIGHT, ENCLOSED, I = 1.00, EXPOSURE C

MAX GABLE VERTICAL LENGTH

2X4 GABLE VERTICAL SPACING	SPECIES	BRACE GRADE	NO BRACES	(1) 1X4 "L" BRACE *		(1) 2X4 "L" BRACE *		(2) 2X4 "L" BRACE **		(1) 2X6 "L" BRACE *		(2) 2X6 "L" BRACE **	
				GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B	GROUP A	GROUP B
24" O.C.	SPF HF	#1 / #2	3' 2"	5' 6"	5' 8"	6' 6"	6' 9"	7' 10"	8' 0"	10' 3"	10' 7"	12' 3"	12' 7"
		#3	3' 1"	4' 5"	4' 5"	5' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"
		STUD	3' 1"	4' 6"	4' 5"	5' 10"	5' 10"	7' 10"	7' 10"	9' 1"	9' 1"	12' 3"	12' 3"
		STANDARD	2' 11"	3' 9"	3' 9"	6' 0"	5' 0"	6' 9"	6' 9"	7' 10"	7' 10"	10' 7"	10' 7"
	SP DFL	#1	3' 6"	5' 8"	5' 11"	6' 8"	7' 0"	7' 10"	8' 5"	10' 3"	11' 1"	12' 3"	13' 2"
		#2	3' 5"	5' 6"	5' 11"	6' 6"	7' 0"	7' 10"	8' 5"	10' 3"	11' 1"	12' 3"	13' 2"
		#3	3' 3"	4' 6"	4' 6"	6' 0"	5' 0"	7' 10"	8' 1"	9' 4"	9' 4"	12' 3"	12' 5"
		STUD	3' 3"	4' 6"	4' 6"	5' 11"	5' 11"	7' 10"	8' 0"	9' 3"	9' 3"	12' 3"	12' 6"
		STANDARD	3' 0"	3' 10"	3' 10"	6' 1"	5' 1"	6' 11"	6' 11"	8' 0"	8' 0"	10' 10"	10' 10"
16" O.C.	SPF HF	#1 / #2	3' 8"	6' 4"	6' 6"	7' 6"	7' 8"	8' 11"	9' 2"	11' 9"	12' 1"	14' 0"	14' 0"
		#3	3' 7"	5' 5"	5' 5"	7' 2"	7' 2"	8' 11"	8' 11"	11' 2"	11' 2"	14' 0"	14' 0"
		STUD	3' 7"	5' 6"	5' 5"	7' 2"	7' 2"	8' 11"	8' 11"	11' 1"	11' 1"	14' 0"	14' 0"
		STANDARD	3' 7"	4' 8"	4' 8"	6' 2"	6' 2"	8' 3"	8' 3"	9' 7"	9' 7"	12' 11"	12' 11"
	SP DFL	#1	4' 0"	6' 4"	6' 10"	7' 8"	8' 1"	8' 11"	9' 7"	11' 9"	12' 8"	14' 0"	14' 0"
		#2	3' 11"	6' 4"	6' 10"	7' 8"	8' 1"	8' 11"	9' 7"	11' 9"	12' 8"	14' 0"	14' 0"
		#3	3' 9"	5' 7"	5' 7"	7' 4"	7' 4"	8' 11"	9' 6"	11' 5"	11' 5"	14' 0"	14' 0"
		STUD	3' 9"	5' 6"	5' 5"	7' 3"	7' 3"	8' 11"	9' 5"	11' 4"	11' 4"	14' 0"	14' 0"
		STANDARD	3' 8"	4' 9"	4' 9"	6' 3"	6' 3"	8' 5"	8' 5"	9' 9"	9' 9"	13' 3"	13' 3"
12" O.C.	SPF HF	#1 / #2	4' 0"	6' 11"	7' 2"	8' 5"	8' 6"	9' 10"	10' 1"	12' 11"	13' 4"	14' 0"	14' 0"
		#3	3' 11"	5' 3"	5' 3"	6' 3"	6' 3"	9' 10"	9' 10"	12' 11"	12' 11"	14' 0"	14' 0"
		STUD	3' 11"	5' 3"	5' 3"	6' 3"	6' 3"	9' 10"	9' 10"	12' 10"	12' 10"	14' 0"	14' 0"
		STANDARD	3' 11"	5' 4"	5' 4"	7' 1"	7' 1"	9' 6"	9' 6"	11' 1"	11' 1"	14' 0"	14' 0"
	SP DFL	#1	4' 5"	6' 11"	7' 5"	8' 3"	6' 11"	9' 10"	10' 7"	12' 11"	13' 11"	14' 0"	14' 0"
		#2	4' 4"	6' 11"	7' 5"	8' 3"	8' 11"	9' 10"	10' 7"	12' 11"	13' 11"	14' 0"	14' 0"
		#3	4' 2"	6' 5"	6' 5"	8' 3"	8' 6"	9' 10"	10' 4"	12' 11"	13' 3"	14' 0"	14' 0"
		STUD	4' 2"	6' 4"	6' 4"	8' 3"	8' 5"	9' 10"	10' 4"	12' 11"	13' 1"	14' 0"	14' 0"
		STANDARD	4' 0"	5' 6"	5' 6"	7' 3"	7' 3"	9' 9"	9' 9"	11' 4"	11' 4"	14' 0"	14' 0"

BRACING GROUP SPECIES AND GRADES:

GROUP A:

SPRUCE-PINE-FIR	
#1 / #2	STANDARD
#3	STUD

HEM-FIR	
#2	STUD
#3	STANDARD

DOUGLAS FIR-LARCH
#3
STUD
STANDARD

SOUTHERN PINE
#3
STUD
STANDARD

GROUP B:

HEM-FIR
#1 & BTR
#1

SOUTHERN PINE
#1
#2

DOUGLAS FIR-LARCH
#1
#2

GABLE TRUSS DETAIL NOTES:

LIVE LOAD DEFLECTION CRITERIA IS L/240.

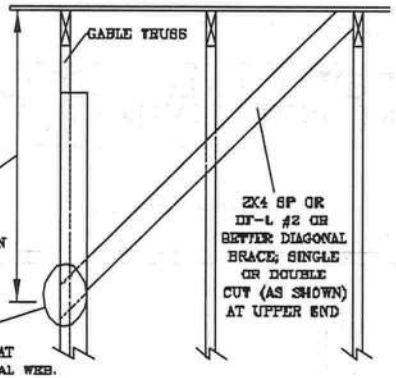
PROVIDE UPLIFT CONNECTIONS FOR 180 PLF OVER CONTINUOUS BEARING (6 PSF TC DEAD LOAD).

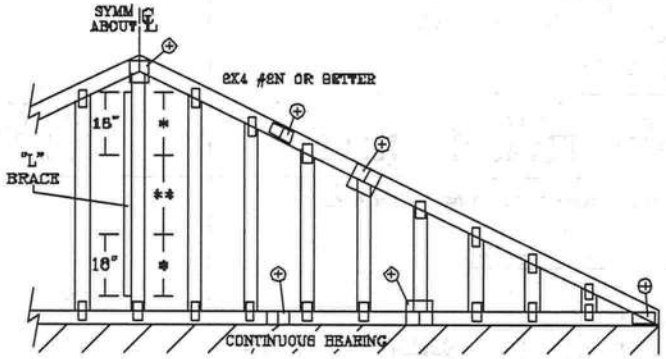
GABLE END SUPPORTS LOAD FROM 4' 0" OUTLOOKERS WITH 2' 0" OVERHANG, OR 12" PLYWOOD OVERHANG.

ATTACH EACH "L" BRACE WITH 10d NAILS.
* FOR (1) "L" BRACE: SPACE NAILS AT 2" O.C. IN 18" END ZONES AND 4" O.C. BETWEEN ZONES.
** FOR (2) "L" BRACES: SPACE NAILS AT 3" O.C. IN 18" END ZONES AND 6" O.C. BETWEEN ZONES.

"L" BRACING MUST BE A MINIMUM OF 60% OF WEB MEMBER LENGTH.

DIAGONAL BRACE OPTION: VERTICAL LENGTH MAY BE DOUBLED WHEN DIAGONAL BRACE IS USED. CONNECT DIAGONAL BRACE FOR 180# AT EACH END. MAX WEB TOTAL LENGTH IS 14'.





REFER TO CHART ABOVE FOR MAX GABLE VERTICAL LENGTH.

GABLE VERTICAL PLATE SIZES

VERTICAL LENGTH	NO SPLICE
LESS THAN 4' 0"	1X4 OR 2X3
GREATER THAN 4' 0", BUT LESS THAN 11' 6"	2X4
GREATER THAN 11' 6"	2.5X4

+ REFER TO COMMON TRUSS DESIGN FOR PEAK, SPLICE, AND HEEL PLATES.

JULIUS LEE LICENSE NO. 34869 STATE OF FLORIDA PROFESSIONAL ENGINEER

REVIEWED
By julius lee at 12:00 pm, Jun 11, 2008

WARNING!! TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI 1-03 BUILDING COMPONENT SAFETY INFORMATION, PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DR., SUITE 200, MADISON, WI 53719) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

JULIUS LEE'S CONS. ENGINEERS P.A.
1456 SW 4th AVENUE
DELRAY BEACH, FL. 33444-2161
No: 34869
STATE OF FLORIDA

MAX. TOT. LD. 60 PSF

MAX. SPACING 24.0"

REF	ASCE7-02-GAB13030
DATE	11/26/03
DWG	MTEK STD GABLE 90' E H7
	-ENG

PIGGYBACK DETAIL

TOP CHORD 2X4 #2 OR BETTER
BOT CHORD 2X4 #2 OR BETTER
WEBS 2X4 #3 OR BETTER

REFER TO SEALED DESIGN FOR DASHED PLATES.

SPACE PIGGYBACK VERTICALS AT 4' OC MAX.

TOP AND BOTTOM CHORD SPLICES MUST BE STAGGERED SO THAT ONE SPLICE IS NOT DIRECTLY OVER ANOTHER.

PIGGYBACK BOTTOM CHORD MAY BE OMITTED. ATTACH VERTICAL WEBS TO TRUSS TOP CHORD WITH 1.5X3 PLATE.

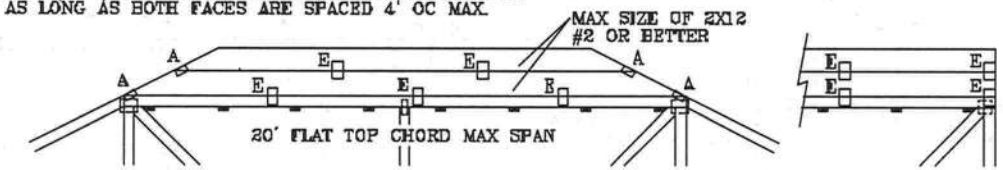
ATTACH PURLINS TO TOP OF FLAT TOP CHORD. IF PIGGYBACK IS SOLID LUMBER OR THE BOTTOM CHORD IS OMITTED, PURLINS MAY BE APPLIED BENEATH THE TOP CHORD OF SUPPORTING TRUSS.

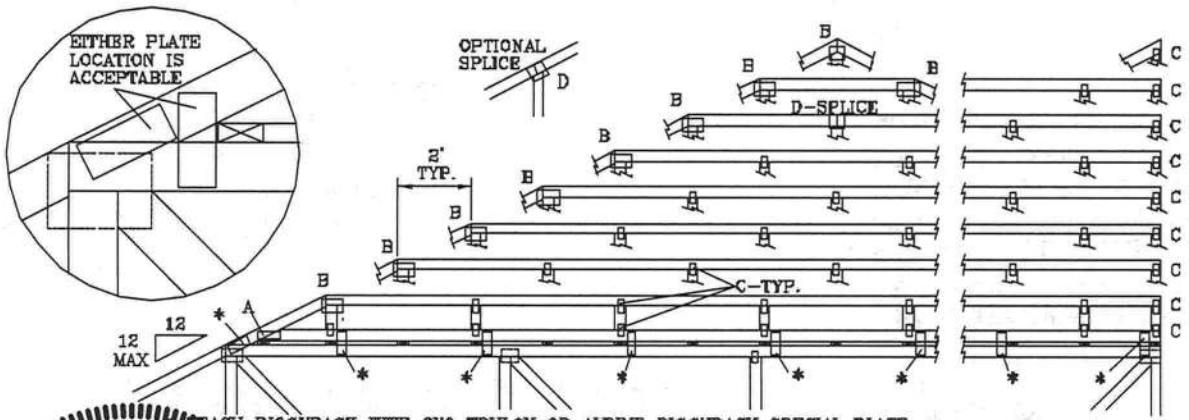
REFER TO ENGINEER'S SEALED DESIGN FOR REQUIRED PURLIN SPACING.

THIS DETAIL IS APPLICABLE FOR THE FOLLOWING WIND CONDITIONS:

- 110 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, 1 MI FROM COAST CAT I, EXP C, WIND TC DL=5 PSF, WIND BC DL=5 PSF
- 110 MPH WIND, 30' MEAN HGT, FBC ENCLOSED BLDG, LOCATED ANYWHERE IN ROOF WIND TC DL=5 PSF, WIND BC DL=5 PSF
- 130 MPH WIND, 30' MEAN HGT, ASCE 7-02, CLOSED BLDG, LOCATED ANYWHERE IN ROOF, CAT II, EXP. C, WIND TC DL=5 PSF, WIND BC DL=5 PSF

FRONT FACE (E,*) PLATES MAY BE OFFSET FROM BACK FACE PLATES AS LONG AS BOTH FACES ARE SPACED 4' OC MAX.





ATTACH PIGGYBACK WITH 3X6 TRULOX OR ALPINE PIGGYBACK SPECIAL PLATE.

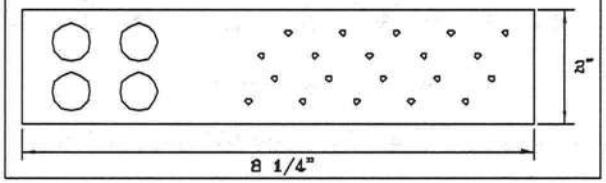
JOINT TYPE	SPANS UP TO			
	30'	34'	38'	52'
A	2X4	2.5X4	2.5X4	3X6
B	4X6	5X6	5X6	5X6
C	1.5X3	1.5X4	1.5X4	1.5X4
D	5X4	5X5	5X5	5X6
E	4X6 OR 3X6 TRULOX AT 4' OC, ROTATED VERTICALLY			

ATTACH TRULOX PLATES WITH (6) 0.120" X 1.375" NAILS, OR EQUAL, PER FACE PER PLY. (4) NAILS IN EACH MEMBER TO BE CONNECTED. REFER TO DRAWING 160 TL FOR TRULOX INFORMATION.

WEB BRACING CHART	
WEB LENGTH	REQUIRED BRACING
0' TO 7'9"	NO BRACING
7'9" TO 10'	1x4 "T" BRACE. SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 8d NAILS AT 4" OC.
10' TO 14'	2x4 "T" BRACE. SAME GRADE, SPECIES AS WEB MEMBER, OR BETTER, AND 80% LENGTH OF WEB MEMBER. ATTACH WITH 16d NAILS AT 4" OC.

* PIGGYBACK SPECIAL PLATE

ATTACH TEETH TO THE PIGGYBACK AT THE TIME OF FABRICATION. ATTACH TO SUPPORTING TRUSS WITH (4) 0.120" X 1.375" NAILS PER FACE PER PLY. APPLY PIGGYBACK SPECIAL PLATE TO EACH TRUSS FACE AND SPACE 4' OC OR LESS.



THIS DRAWING REPLACES DRAWINGS 634,016 634,017 & 847,045

JULIUS LEE LICENSE NO. 34869 STATE OF FLORIDA PROFESSIONAL ENGINEER

WARNING: TRUSSES REQUIRE EXTREME CARE IN FABRICATING, HANDLING, SHIPPING, INSTALLING AND BRACING. REFER TO BCSI (-03 BUILDING COMPONENT SAFETY INFORMATION), PUBLISHED BY TPI (TRUSS PLATE INSTITUTE, 583 D'ONOFRIO DR., SUITE 200, MADISON, WI. 53719) AND WTCA (WOOD TRUSS COUNCIL OF AMERICA, 6300 ENTERPRISE LN, MADISON, WI 53719) FOR SAFETY PRACTICES PRIOR TO PERFORMING THESE FUNCTIONS. UNLESS OTHERWISE INDICATED, TOP CHORD SHALL HAVE PROPERLY ATTACHED STRUCTURAL PANELS AND BOTTOM CHORD SHALL HAVE A PROPERLY ATTACHED RIGID CEILING.

REVIEWED
By julius lee at 11:59 am, Jun 11, 2008

JULIUS LEE'S
CONS. ENGINEERS P.A.
1455 SW 4th AVENUE
DELRAY BEACH, FL. 33444-2161

No: 34869
STATE OF FLORIDA

MAX LOADING
55 PSF AT 1.33 DUR. FAC.
50 PSF AT 1.25 DUR. FAC.
47 PSF AT 1.15 DUR. FAC.
SPACING 24.0"

REF PIGGYBACK
DATE 09/12/07
DRWG MITEK STD PIGGY
-ENG JL

TOE-NAIL DETAIL

TOE-NAILS TO BE DRIVEN AT AN ANGLE OF APPROXIMATELY THIRTY DEGREES WITH THE PIECE AND STARTED APPROXIMATELY ONE-THIRD THE LENGTH OF THE NAIL FROM THE END OF THE MEMBER.

PER ANSI/AF&PA NDS-2001 SECTION 12.4.1 - EDGE DISTANCE, END DISTANCE, SPACING: "EDGE DISTANCES, END DISTANCES AND SPACINGS FOR NAILS AND SPIKES SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD."

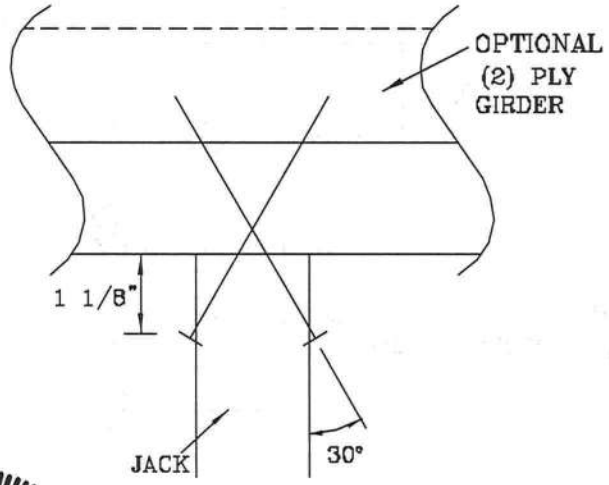
THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES, AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED.

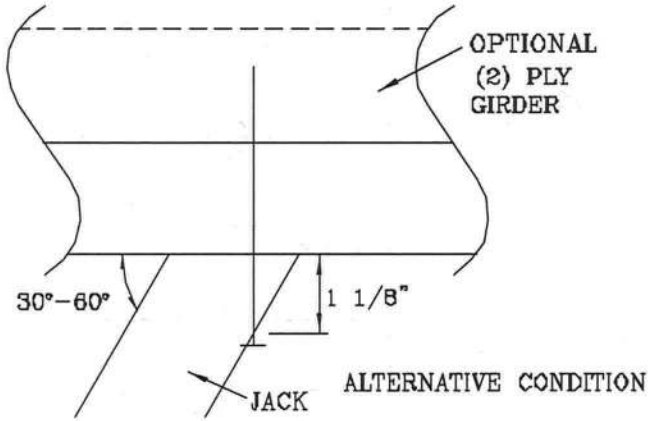
THIS DETAIL DISPLAYS A TOE-NAILED CONNECTION FOR JACK FRAMING INTO A SINGLE OR DOUBLE PLY SUPPORTING GIRDER.

MAXIMUM VERTICAL RESISTANCE OF 16d (0.162"X3.5") COMMON TOE-NAILS

NUMBER OF TOE-NAILS	SOUTHERN PINE		DOUGLAS FIR-LARCH		HEM-FIR		SPRUCE PINE FIR	
	1 PLY	2 PLIES	1 PLY	2 PLIES	1 PLY	2 PLIES	1 PLY	2 PLIES
2	197#	256#	181#	234#	156#	203#	154#	199#
3	296#	383#	271#	351#	234#	304#	230#	298#
4	394#	511#	361#	468#	312#	406#	307#	397#
5	493#	639#	452#	585#	390#	507#	384#	496#

ALL VALUES MAY BE MULTIPLIED BY APPROPRIATE DURATION OF LOAD FACTOR.





ALTERNATIVE CONDITION

THIS DRAWING REPLACES DRAWING 784040

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REVIEWED
By julius lee at 11:59 am, Jun 11, 2008

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CONS. ENGINEERS P.A.
1455 SW 4th AVENUE
DELRAY BEACH, FL 33444-2161

No: 34869
STATE OF FLORIDA

TC LL	PSF	REF	TOE-NAIL
TC DL	PSF	DATE	09/12/07
BC DL	PSF	DRWG	CNTONAIL1103
BC LL	PSF	-ENG	JL
TOT. LD.	PSF		
DUR. FAC.	1.00		
SPACING			

TRULOX CONNECTION DETAIL

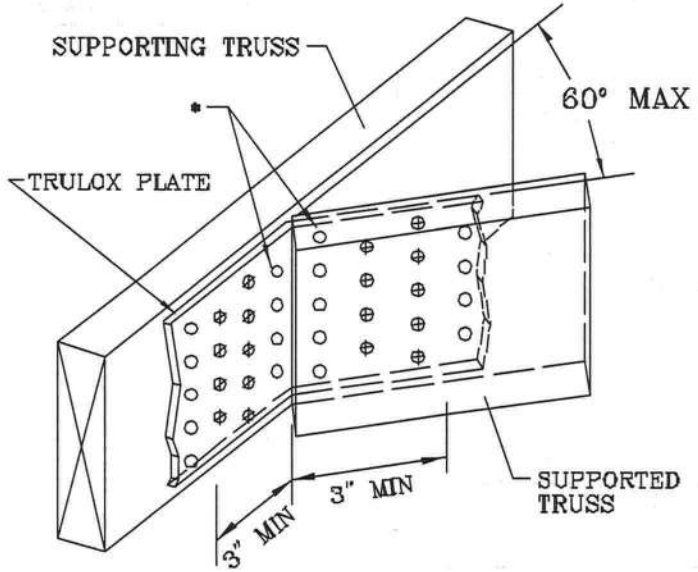
11 GAUGE (0.120" X 1.375") NAILS REQUIRED FOR TRULOX PLATE ATTACHMENT. FILL ROWS COMPLETELY WHERE SHOWN (⊕).

* NAILS MAY BE OMITTED FROM THESE ROWS.

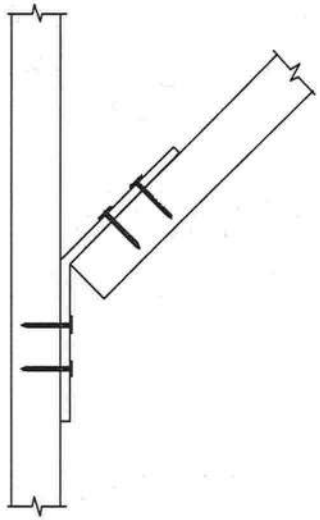
THIS DETAIL MAY BE USED WITH SO. PINE, DOUGLAS-FIR OR HEM-FIR CHORDS WITH A MINIMUM 1.00 DURATION OF LOAD OR SPRUCE-PINE-FIR CHORDS WITH A MINIMUM 1.15 DURATION OF LOAD. CHORD SIZE OF BOTH TRUSSES MUST EXCEED THE TRULOX PLATE WIDTH.

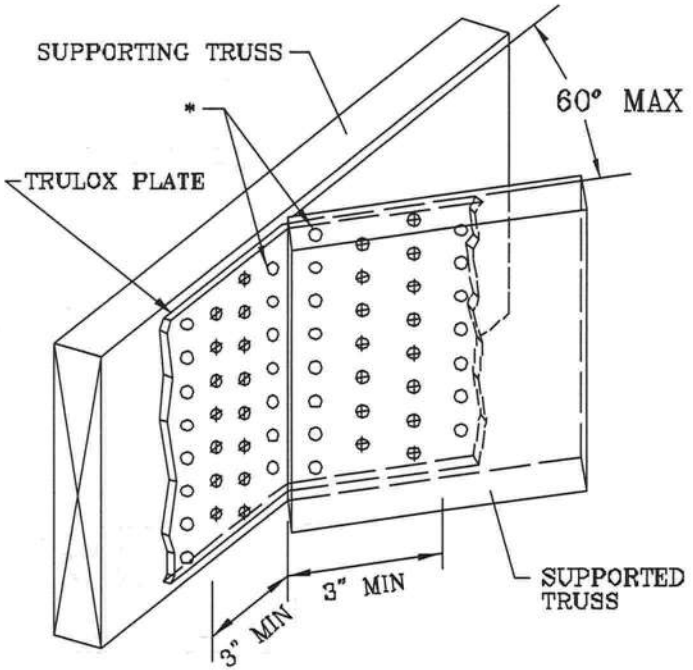
TRULOX PLATE IS CENTERED ON THE CHORDS AND BENT BETWEEN NAIL ROWS.

REFER TO ENGINEER'S SEALED DESIGN REFERENCING THIS DETAIL FOR LUMBER, PLATES, AND OTHER INFORMATION NOT SHOWN.



MINIMUM 3X6 TRULOX PLATE





MINIMUM 5X6 TRULOX PLATE

TRULOX PLATE SIZE	REQUIRED NAILS PER TRUSS	MAXIMUM LOAD UP OR DOWN
3X6	9	350#
5X6	15	990#

REVIEWED
By julius lee at 11:58 am, Jun 11, 2008

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THIS DRAWING REPLACES DRAWINGS 1,158,989 1,158,989/R 1,154,944 1,152,217 1,152,017 1,159,154 & 1,151,524

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JULIUS LEE'S
CONS. ENGINEERS P.A.
1455 SW 4th AVENUE
DELRAY BEACH, FL. 33444-2151

No: 34869
STATE OF FLORIDA

REF	TRULOX
DATE	11/26/03
DRWG	CNTRULOX1103
-ENG	JL

MULTIPLE-MEMBER CONNECTIONS FOR SIDE-LOADED BEAMS

Maximum Uniform Load Applied to Either Outside Member (PLF)

Connector Type	Number of Rows	Connector On-Center Spacing	Connector Pattern					
			Assembly A	Assembly B	Assembly C	Assembly D	Assembly E	Assembly F
			3½" 2-ply	5¼" 3-ply	5¼" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail[1]	2	12"	370	***280***	280	***245***		
	3	12"	555	***415***	415	***370***		
½" A307 Through Bolts[2][4]	2	24"	505	380	520	465	860	340
		19.2"	635	475	655	580	1,075	425
		16"	760	570	785	695	1,290	505
SDS ¼" x 3½"[4]	2	24"	680	***510***	510	***455***		
		19.2"	850	***640***	640	***565***		
		16"	1,020	***765***	765	***680***		
SDS ¼" x 6"[3][4]	2	24"				***455***	***465***	***455***
		19.2"				***565***	***580***	***565***
		16"				***680***	***695***	***680***
USP WS35[4]	2	24"	480	***360***	360	***320***		
		19.2"	600	***450***	450	***400***		
		16"	715	***540***	540	***480***		
USP WS6[3][4]	2	24"				***350***	***525***	***350***
		19.2"				***440***	***660***	***440***
		16"				***525***	***790***	***525***
3⅜" TrussLok[4]	2	24"	635	***475***	475	***425***		
		19.2"	795	***595***	595	***530***		
		16"	955	***715***	715	***635***		
5" TrussLok[4]	2	24"		***500***	500	***445***	***480***	***445***
		19.2"		***625***	625	***555***	***600***	***555***
		16"		***750***	750	***665***	***725***	***665***
6¾" TrussLok[4]	2	24"				445	620	445
		19.2"				555	770	555
		16"				665	925	665

(1) Nailed connection values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.

(2) Washers required. Bolt holes to be 9/16" maximum.

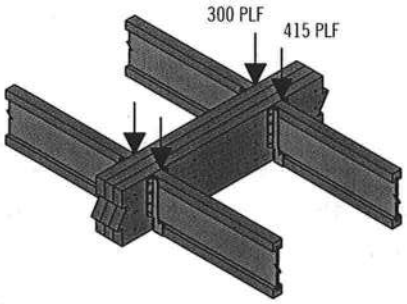
(3) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

(4) 24" on-center bolted and screwed connection values may be doubled for 12" on-center spacing.

General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- Use specific gravity of 0.5 when designing lateral connections.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- ***Bold Italic*** cells indicate **Connector Pattern** must be installed on both sides. Stagger fasteners on opposite side of beam by ½ the required **Connector Spacing**.
- Verify adequacy of beam in allowable load tables on pages 16–33.
- 7" wide beams should be side-loaded only when loads are applied to both sides of the members (to minimize rotation).
- Minimum end distance for bolts and screws is 6".
- Beams wider than 7" require special consideration by the design professional.

Uniform Load Design Example



First, check the allowable load tables on pages 16–33 to verify that three pieces can carry the total load of 715 plf with proper live load deflection criteria. Maximum load applied to either outside member is 415 plf. For a 3-ply 1¾" assembly, two rows of 10d (0.128" x 3") nails at 12" on-center is good for only 280 plf. Therefore, use three rows of 10d (0.128" x 3") nails at 12" on-center (good for 415 plf).

Alternates:
Two rows of ½" bolts or SDS ¼" x 3½" screws at 19.2" on-center.